AIR SPRING REPLACEMENT GUIDE 2013

sureride

ESPECIALLY DESIGNED FOR THE NORTH AMERICAN MARKET

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WE KEEP AMERICA MOVING

How do we do that? With conviction. And sureride – an integral part of TrelleborgVibracoustic, the world market and technology leader for anti-vibration solutions. For many years TrelleborgVibracoustic has been designing and producing high performance air springs for the major truck manufacturers in Europe. We now have one of the most comprehensive product ranges in the industry and we are rapidly expanding into the North American aftermarket.

We have used all our industry experience to develop the sureride brand, designed to specifically target the needs of truck operators in the North American market. We already supply local truck manufacturers with a wide variety of engine, suspension and thermal management anti-vibration solutions and this new range of air springs is an extension to our extensive product portfolio.

SURERIDE – QUALITY YOU CAN TRUST

There are many reasons why you should choose sureride. Our air spring product range comes directly from one of the world's leading suppliers of high performance air springs, TrelleborgVibracoustic.

TrelleborgVibracoustic air springs are renowned for their outstanding durability and they consistently out-perform competitor products under laboratory tests, meaning more miles and lower replacement costs.

The sureride brand ensures high performance at affordable prices and ready availability. Our warehouse in Mid-America is ideally located for easy ordering and fast delivery.

All our air springs come with a Quality Assurance guarantee. Tested to the highest standards at dedicated test facilities in Europe, Mexico and China, we offer an industry leading product warranty of two years or 250,000 miles - whichever comes first.*

* Subject to the terms and conditions highlighted on page 22

AIR SPRING COMPONENTS

1. TOP PLATE
Connects the Air Spring bellow to the vehicle frame.

2. BUMPER
Restricts the air spring and ensures emergency operation functionality.

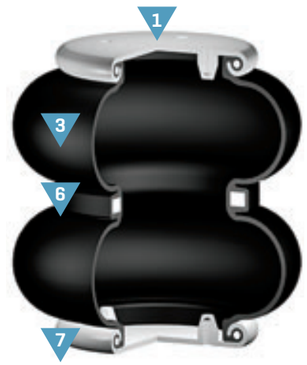
3. MEMBRANE
The bellow is a vulcanized rubber construction, consisting of a rubber internal layer, a layer of reinforced material and an external rubber layer. This construction gives the bellow it's strength and durability.

4. ENCLOSURE
Connects the air spring and the piston and protects leak integrity. Can be vulcanized onto the product or connected manually as required.

5. PISTON
Connects the air spring and the axle.

6. GIRDLE HOOP
Stabilizes the air spring.

7. BOTTOM PLATE
Connects the air spring and axle.



HOW TO USE THE TECHNICAL DRAWINGS

V = TrelleborgVibracoustic

M = Mexico
H = Hungary

1 = Rolling diaphragm air spring
2 = Convoluted air spring

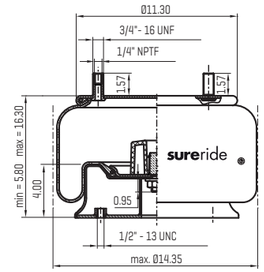
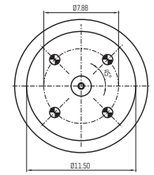
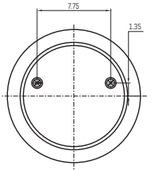
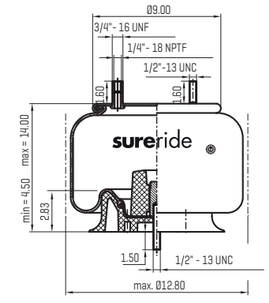
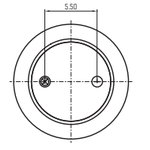
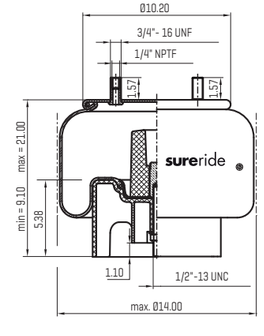
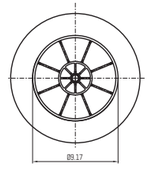
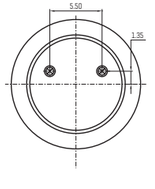
8050 = Unique industry part number

V → M → 1 → 8050

SURERIDE ORDER NO.: VM1-8050

APPLICATION:		
	Hendrickson	B12514013, S4771
	Ridewell	1003588080C
	SAF Holland (Neway)	5700 050
	Volvo	31 304 98
	Watson & Chalin	AS-0039

TECHNICAL DRAWINGS

SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-8050 Plastic Piston				Hendrickson B12514013 S4771 Navistar 1685174C-1 Ridewell 1003588080C SAF Holland (Neway) 5700 050 Volvo 31 304 98 Watson & Chalin AS-0039
VM1-8204 Plastic Piston				SAF Holland (Neway) 905 57 173 905 57 223
VM1-8708 Plastic Piston				Hendrickson S21966 (HKA200 Special) 28929

TECHNICAL DRAWINGS

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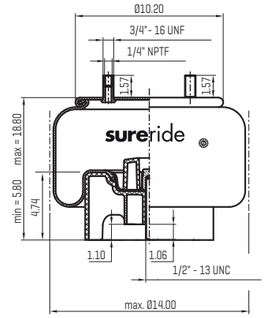
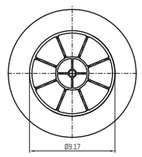
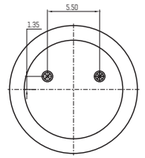
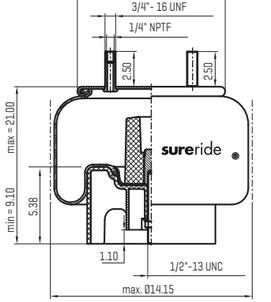
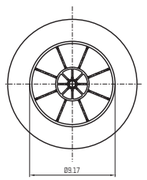
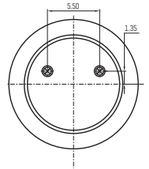
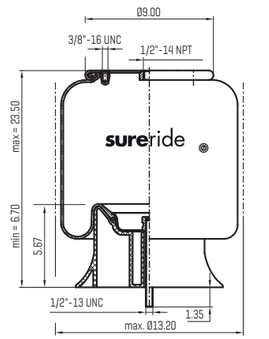
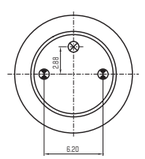
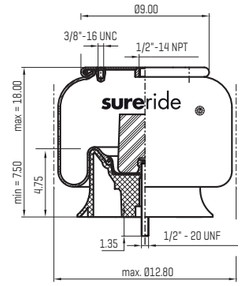
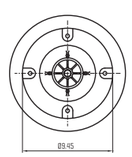
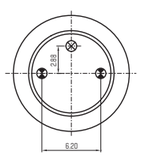
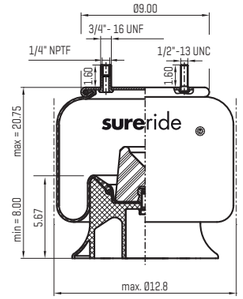
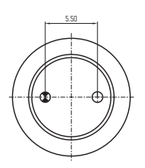
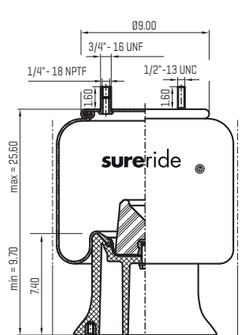
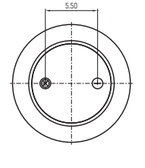
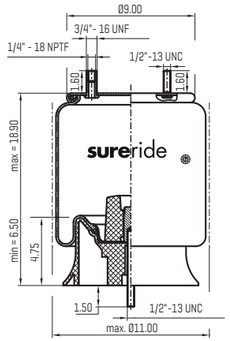
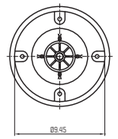
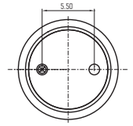
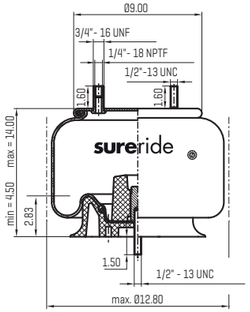
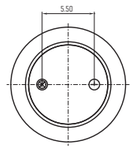
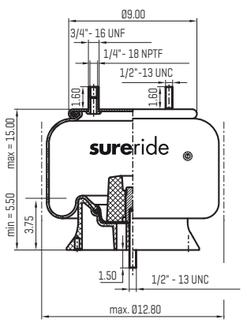
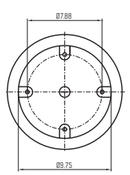
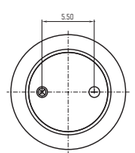
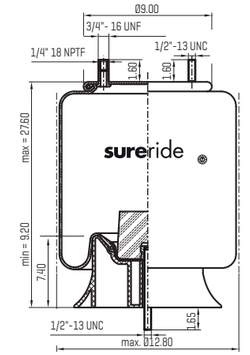
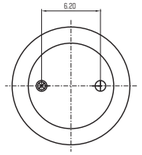
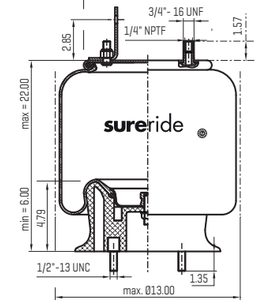
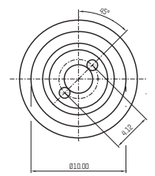
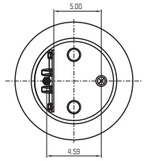
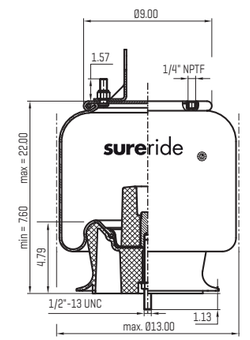
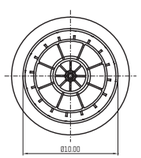
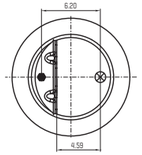
VM1-8709 Plastic Piston				Hendrickson S21800 S20900
VM1-8713 Plastic Piston				Hendrickson S22948
VM1-8852 Plastic Piston				Peterbilt 03-07887

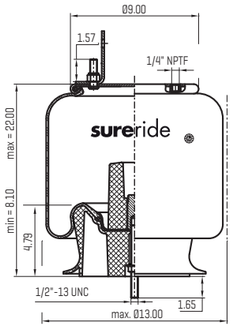
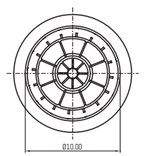
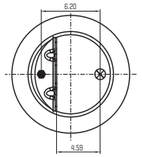
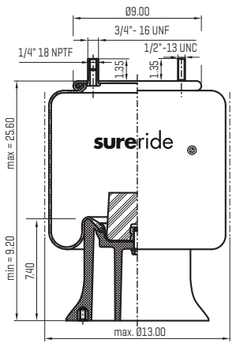
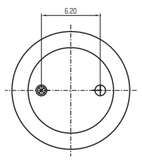
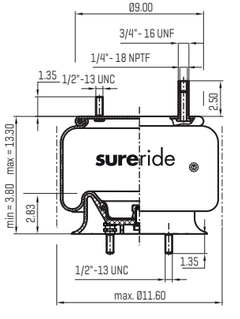
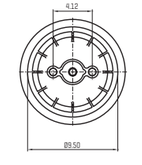
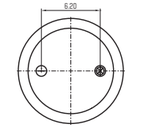
SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-9069 Plastic Piston				Hendrickson 13031 Load Guard SC2034 Navistar 554764C-1 Peterbilt 3 01649 3 02038 3 02456 3 04759 3 06746 3 07112 3 10042 Volvo 85 101 145 Watson & Chalin AS-0077
VM1-9082 Plastic Piston				Hendrickson B12514-007, B2066-36514-7, S11651 Hutchens — Load Guard H-9630-01 — SC2035 R & S Truck — Navistar 1090217 — 517559C-9 Ridewell 1003589082C Reyco Granning 12882-01, 1359 SAF Holland (Neway) 905 57 006, 905 57 027 905 57 033, 905 57 037 905 57 054, 905 57 075 Watson & Chalin AS-0011
VM1-9101 Plastic Piston				Reyco Granning 12883-01 Ridewell 1003589101C SAF Holland (Neway) 905 57 008 905 57 009 905 57 043 905 57 082 Watson & Chalin AS-0040

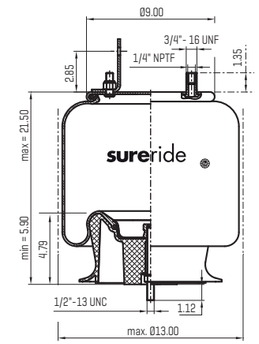
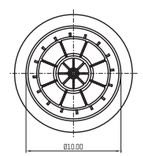
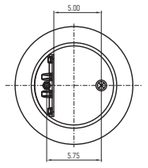
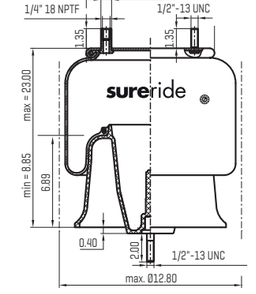
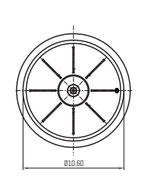
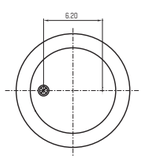
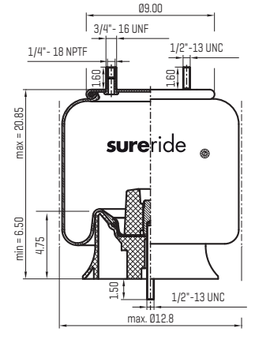
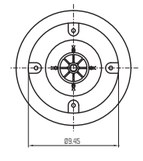
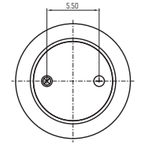
TECHNICAL DRAWINGS

SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-9293 Plastic Piston				Load Guard SC2048 Reyco Granning 8896 SAF Holland (Neway) 905 57 120 905 57 127
VM1-9307 Plastic Piston				SAF Holland (Neway) 905 57 129
VM1-9366 Plastic Piston				SAF Holland (Neway) 905 57 160 905 57 210 905 57 225 Watson & Chalin AS-0054

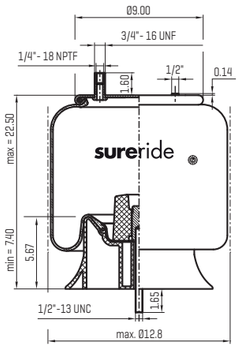
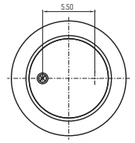
SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-9370 Plastic Piston				Watson & Chalin AS-0057
VM1-9371 Plastic Piston				Navistar 1670073C-1 1686386C-1 2027911C-1
VM1-9373 Plastic Piston				Hendrickson 57122-2

TECHNICAL DRAWINGS

SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-9375 Plastic Piston				Hendrickson 50899-1 50899-2 Mack 3645Q27
VM1-9394 Plastic Piston				Fruehauf UCD-9394-1 UCD-9394-2 UCD-9394-3 UCD-9394-4 Hendrickson S10352 13161 Ridewell 1003589394C SAF Holland (Neway) 9393-2 Watson & Chalin AS-1042
VM1-9422 Plastic Piston				Hendrickson 13032 Kenworth Air Glide 100 K303-6 K303-14 K303-15 Load Guard SC2050 Navistar 554762C1 Volvo 85101148 Watson & Chalin AS-0017

SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-9648 Plastic Piston				Navistar 2027911C1 2027911C2 2027911C3 SAF Holland (Neway) 508 57 000 905 57 363 905 57 972
VM1-9780 Plastic Piston				Freightliner 16-15595-000 16-15595-001 16-15595-002 16-13810-000 16-13810-001 16-13810-002 681-320-0017
VM1-9921 Plastic Piston				SAF Holland (Neway) 905 57 117 Watson & Chalin AS-0090

TECHNICAL DRAWINGS

SURERIDE ORDER NO.	CROSS SECTION VIEW	TOP VIEW	BOTTOM VIEW	APPLICATION
VM1-9935 Plastic Piston				SAF Holland (Neway) 905 57 157 905 57 301 Watson & Chalin AS-01641G

AIR SPRING SELECTION GUIDE

BY OEM APPLICATION – A TO K

APPLICATION	ORIGINAL NO.	SURERIDE ORDER NO.	PAGE
Freightliner	16-13810-000	VM1-9780	13
Freightliner	16-13810-001	VM1-9780	13
Freightliner	16-13810-002	VM1-9780	13
Freightliner	16-15595-000	VM1-9780	13
Freightliner	16-15595-001	VM1-9780	13
Freightliner	16-15595-002	VM1-9780	13
Freightliner	681-320-0017	VM1-9780	13
Fruehauf	UCD-9394-1	VM1-9394	12
Fruehauf	UCD-9394-2	VM1-9394	12
Fruehauf	UCD-9394-3	VM1-9394	12
Fruehauf	UCD-9394-4	VM1-9394	12
Hendrickson	13031	VM1-9069	09
Hendrickson	13032	VM1-9422	12
Hendrickson	13161	VM1-9394	12
Hendrickson	28929	VM1-8708	07
Hendrickson	50899-1	VM1-9375	12
Hendrickson	50899-2	VM1-9375	12
Hendrickson	57122-2	VM1-9373	11
Hendrickson	B12514-007	VM1-9082	09
Hendrickson	B12514013	VM1-8050	07
Hendrickson	B2066-36514-7	VM1-9082	09
Hendrickson	S10352	VM1-9394	12
Hendrickson	S11651	VM1-9082	09
Hendrickson	S2066	VM1-9082	09
Hendrickson	S20900	VM1-8709	08
Hendrickson	S21800	VM1-8709	08
Hendrickson	S21966	VM1-8708	07
Hendrickson	S22948	VM1-8713	08
Hendrickson	S4771	VM1-8050	07
Hutchens	H-9630-01	VM1-9082	09
Kenworth	K-303-6	VM1-9422	12
Kenworth	K-303-14	VM1-9422	12
Kenworth	K-303-15	VM1-9422	12

AIR SPRING SELECTION GUIDE

BY OEM APPLICATION – L TO S

APPLICATION	ORIGINAL NO.	SURERIDE ORDER NO.	PAGE
Load Guard	SC2034	VM1-9069	09
Load Guard	SC2035	VM1-9082	09
Load Guard	SC2048	VM1-9293	10
Load Guard	SC2050	VM1-9422	12
Mack	3645Q27	VM1-9375	12
Navistar	1670073C-1	VM1-9371	11
Navistar	1685174C-1	VM1-8050	07
Navistar	1686386C-1	VM1-9371	11
Navistar	2027911C-1	VM1-9371	11
Navistar	2027911C-1	VM1-9648	13
Navistar	2027911C-2	VM1-9648	13
Navistar	2027911C-3	VM1-9648	13
Navistar	517559C-9	VM1-9082	09
Navistar	554762C-1	VM1-9422	12
Navistar	554764C-1	VM1-9069	09
Peterbilt	301649	VM1-9069	09
Peterbilt	302038	VM1-9069	09
Peterbilt	302456	VM1-9069	09
Peterbilt	304759	VM1-9069	09
Peterbilt	306746	VM1-9069	09
Peterbilt	307112	VM1-9069	09
Peterbilt	310042	VM1-9069	09
Peterbilt	03-07887	VM1-8852	08
R & S Truck	1090217	VM1-9082	09
Reyco Granning	12882-01 1359	VM1-9082	09
Reyco Granning	8896	VM1-9293	10
Reyco Granning	12883-01	VM1-9101	09
Ridewell	1003588050C	VM1-8050	07
Ridewell	1003589082C	VM1-9082	09
Ridewell	1003589394C	VM1-9394	12
Ridewell	1003589101C	VM1-9101	09
SAF Holland (Neway)	5700 050	VM1-8050	07

BY OEM APPLICATION – S TO W

APPLICATION	ORIGINAL NO.	SURERIDE ORDER NO.	PAGE
SAF Holland (Neway)	905 57 006	VM1-9082	09
SAF Holland (Neway)	905 57 008	VM1-9101	09
SAF Holland (Neway)	905 57 009	VM1-9101	09
SAF Holland (Neway)	905 57 027	VM1-9082	09
SAF Holland (Neway)	905 57 033	VM1-9082	09
SAF Holland (Neway)	905 57 037	VM1-9082	09
SAF Holland (Neway)	905 57 043	VM1-9101	09
SAF Holland (Neway)	905 57 054	VM1-9082	09
SAF Holland (Neway)	905 57 075	VM1-9082	09
SAF Holland (Neway)	905 57 082	VM1-9101	09
SAF Holland (Neway)	905 57 117	VM1-9921	13
SAF Holland (Neway)	905 57 120	VM1-9293	10
SAF Holland (Neway)	905 57 127	VM1-9293	10
SAF Holland (Neway)	905 57 129	VM1-9307	10
SAF Holland (Neway)	905 57 157	VM1-9935	14
SAF Holland (Neway)	905 57 173	VM1-8204	07
SAF Holland (Neway)	905 57 223	VM1-8204	07
SAF Holland (Neway)	905 57 301	VM1-9935	14
SAF Holland (Neway)	9393-2	VM1-9394	12
SAF Holland (Neway)	905 57 160	VM1-9366	10
SAF Holland (Neway)	905 57 210	VM1-9366	10
SAF Holland (Neway)	905 57 225	VM1-9366	10
SAF Holland (Neway)	508 57 000	VM1-9648	13
SAF Holland (Neway)	905 57 363	VM1-9648	13
SAF Holland (Neway)	905 57 972	VM1-9648	13
Volvo	31 304 98	VM1-8050	07
Volvo	85 101 145	VM1-9069	09
Volvo	85 101 148	VM1-9422	12
Watson & Chalin	AS-0011	VM1-9082	09
Watson & Chalin	AS-0039	VM1-8050	07
Watson & Chalin	AS-0077	VM1-9069	09
Watson & Chalin	AS-0090	VM1-9921	13
Watson & Chalin	AS-0017	VM1-9422	12
Watson & Chalin	AS-0142	VM1-9394	12
Watson & Chalin	AS-01641G	VM1-9935	14
Watson & Chalin	AS-0040	VM1-9101	09
Watson & Chalin	AS-0057	VM1-9370	11
Watson & Chalin	AS-0054	VM1-9366	10

AIR SPRING SELECTION GUIDE

CROSS REFERENCE TO OTHER BRANDS – A TO C

MANUFACTURER	BELLOW NO.	ORDER NO.	SURERIDE ORDER NO.	PAGE
Aktas/Airtech	38050-01 K	137142	VM1-8050	07
Aktas/Airtech	38024 KPP	137182	VM1-8204	07
Aktas/Airtech	38708 KPP	137202	VM1-8708	07
Aktas/Airtech	38709 KPP	137072	VM1-8709	08
Aktas/Airtech	38713 KPP	137082	VM1-8713	08
Aktas/Airtech	38852 KPP	137192	VM1-8852	08
Aktas/Airtech	39069 K	134482	VM1-9069	09
Aktas/Airtech	39082 KPP	131212	VM1-9082	09
Aktas/Airtech	39101 KPP	131692	VM1-9101	09
Aktas/Airtech	39293 KPP	136942	VM1-9293	10
Aktas/Airtech	39307 KPP	132052	VM1-9307	10
Aktas/Airtech	39366 KPP	132032	VM1-9366	10
Aktas/Airtech	39370 KPP	137122	VM1-9370	11
Aktas/Airtech	39371 KPP	136932	VM1-9371	11
Aktas/Airtech	39373 KPP	136122	VM1-9373	11
Aktas/Airtech	39375 KPP	136032	VM1-9375	12
Aktas/Airtech	39394 KPP	131192	VM1-9394	12
Aktas/Airtech	39422-01 KPP	137002	VM1-9422	12
Aktas/Airtech	39648 KPP	137172	VM1-9648	13
Aktas/Airtech	39780-01 KPP	131672	VM1-9780	13
Aktas/Airtech	39921 KPP	132502	VM1-9921	13
Aktas/Airtech	39935 KPP	132622	VM1-9935	14
ContiTech	9 9-12 P 314	64255	VM1-9422	12
ContiTech	11 10.5C-16 A 320	64254	VM1-8050	07
ContiTech	12 10.5E-16 A 320	64254	VM1-8050	07
ContiTech	9 10-12 P 484	64456	VM1-8204	07
ContiTech	10 10-16 S 526	64638	VM1-8708	07
ContiTech	10 10.5-15P 460	64645	VM1-8709	08
ContiTech	10 10-15 S 453	64645	VM1-8709	08
ContiTech	10 10-16 S 533	64363	VM1-8713	08
ContiTech	9 10-19 P 472	64339	VM1-8852	08
ContiTech	9 10-14 P 312	64274	VM1-9069	09
ContiTech	9 10-16 P 310	64269	VM1-9082	09
ContiTech	9 10-19 P315	64279	VM1-9101	09
ContiTech	9 9K-15 P 424	64388	VM1-9293	10
ContiTech	9 10-10 P 471	67490	VM1-9307	10
ContiTech	9 10-12 P 488	64459	VM1-9366	10
ContiTech	9 10-21 P 448	64383	VM1-9370	11

CROSS REFERENCE TO OTHER BRANDS – C TO F

MANUFACTURER	BELLOW NO.	ORDER NO.	SURERIDE ORDER NO.	PAGE
ContiTech	9 10-18.5 P 521	64290	VM1-9371	11
ContiTech	9 10-18.5 P 440	64336	VM1-9373	11
ContiTech	9 10-18.5 P 519	64336	VM1-9373	11
ContiTech	9 10-18.5 P 451	64264	VM1-9375	12
ContiTech	9 10-19 P 383	64615	VM1-9394	12
ContiTech	9 10-18.5 P 456	64263	VM1-9648	13
ContiTech	9 10 S-16 A 382	64266	VM1-9780	13
ContiTech	9 10-18.5 P 443	64402	VM1-9921	13
ContiTech	9 10-17.5 P 548	64412	VM1-9935	14
Firestone	1T19J-6	W013588050	VM1-8050	07
Firestone	1T19ZK-5.7	W013588050	VM1-8050	07
Firestone	1T15M-2	W013588204	VM1-8204	07
Firestone	1T17CA-6.5	W013588708	VM1-8708	07
Firestone	1T17CA-5	W013588709	VM1-8709	08
Firestone	1T17CA-6.5	W013588713	VM1-8713	08
Firestone	1T15M-9	W013588852	VM1-8852	08
Firestone	1T15M-4	W013589069	VM1-9069	09
Firestone	1T15M-6	W013589082	VM1-9082	09
Firestone	1T15M-9	W013589101	VM1-9101	09
Firestone	1T15LP-5	W013589293	VM1-9293	10
Firestone	1T15M-0.5	W013589307	VM1-9307	10
Firestone	1T15M-2	W013589366	VM1-9366	10
Firestone	1T15M-11	W013589370	VM1-9370	11
Firestone	1T15M-8	W013589371	VM1-9371	11
Firestone	1T15M-8	W013589373	VM1-9373	11
Firestone	1T15M-8	W013589375	VM1-9375	12
Firestone	1T15M-9	W013589394	VM1-9394	12
Firestone	1T15KW-1.5	W013589422	VM1-9422	12
Firestone	1T15L-1.5	W013589422	VM1-9422	12
Firestone	1T15M-8	W013589648	VM1-9648	13
Firestone	1T15ZR-6	W013589780	VM1-9780	13
Firestone	1T15M-7.5	W013589921	VM1-9921	13
Firestone	1T15M-7.5	W013589935	VM1-9935	14

AIR SPRING SELECTION GUIDE

CROSS REFERENCE TO OTHER BRANDS – G

MANUFACTURER	BELLOW NO.	ORDER NO.	SURERIDE ORDER NO.	PAGE
Goodyear	566283015	1R14-039	VM1-8050	07
Goodyear	566283015	1R14-055	VM1-8050	07
Goodyear	566243067	1R12-508	VM1-8204	07
Goodyear	566263078	1R13-177	VM1-8708	07
Goodyear	566263078	1R13-159	VM1-8709	08
Goodyear	566263078	1R13-177	VM1-8709	08
Goodyear	566263078	1R13-140	VM1-8713	08
Goodyear	566263078	1R13-176	VM1-8713	08
Goodyear	566243066	1R12-568	VM1-8852	08
Goodyear	566243038	1R12-069	VM1-9069	09
Goodyear	566243038	1R12-092	VM1-9082	09
Goodyear	566243066	1R12-103	VM1-9101	09
Goodyear	566203021	1R10-120	VM1-9293	10
Goodyear	566243067	1R12-095	VM1-9307	10
Goodyear	566243067	1R12-487	VM1-9366	10
Goodyear	566243117	1R12-580	VM1-9370	11
Goodyear	566243038	1R12-244	VM1-9371	11
Goodyear	566243038	1R12-401	VM1-9371	11
Goodyear	566243097	1R12-403	VM1-9373	11
Goodyear	566243097	1R12-404	VM1-9375	12
Goodyear	566243097	1R12-488	VM1-9375	12
Goodyear	566243097	1R12-030	VM1-9375	12
Goodyear	566243097	1R12-031	VM1-9375	12
Goodyear	566243066	1R12-142	VM1-9394	12
Goodyear	566223021	1R11-028	VM1-9422	12
Goodyear	566243038	1R12-538	VM1-9648	13
Goodyear	566243108	1R12-303	VM1-9780	13
Goodyear	566243066	1R12-142	VM1-9921	13
Goodyear	566243097	1R12-532	VM1-9935	14

CROSS REFERENCE TO OTHER BRANDS – T

MANUFACTURER	BELLOW NO.	ORDER NO.	SURERIDE ORDER NO.	PAGE
Triangle	6367	8320	VM1-8050	07
Triangle	6361	8484	VM1-8204	07
Triangle	6382	8526	VM1-8708	07
Triangle	6390	8453	VM1-8709	08
Triangle	6390	8460	VM1-8709	08
Triangle	6382	8533	VM1-8713	08
Triangle	6364	8472	VM1-8852	08
Triangle	6362	8312	VM1-9069	09
Triangle	6363	8310	VM1-9082	09
Triangle	6364	8315	VM1-9101	09
Triangle	6378	8424	VM1-9293	10
Triangle	6360	8471	VM1-9307	10
Triangle	6361	8488	VM1-9366	10
Triangle	6373	8448	VM1-9370	11
Triangle	6391	8521	VM1-9371	11
Triangle	6391	8519	VM1-9373	11
Triangle	6364	8383	VM1-9394	12
Triangle	6364	8404	VM1-9394	12
Triangle	6368	8314	VM1-9422	12
Triangle	6363	8456	VM1-9648	13
Triangle	6363	8382	VM1-9780	13
Triangle	6391	8443	VM1-9921	13
Triangle	6391	8548	VM1-9935	14

WE DON'T PROMISE – WE GUARANTEE

We would like to prove our commitment to product quality by offering a two year or 250,000 miles warranty (whichever comes first) with all our air springs. The warranty takes effect from the date of your invoice. Any air springs that fail during this warranty period should be returned to TrelleborgVibracoustic for technical assessment and it will be replaced free of charge, providing the failure is product related. TrelleborgVibracoustic is not responsible for any failure resulting from incorrect installation or maintenance. Nor can we accept liability for products in case of improper use, handling, storage or assembly.

If you have any questions about correct fitting, maintenance or storage please contact our air spring team. They will be happy to advise you. This warranty statement is for general informational purpose. All warranty claims are subject to TrelleborgVibracoustic's general terms and conditions for sales, delivery and payment terms as it pertains to air springs for commercial vehicles. See your TrelleborgVibracoustic sales representative or dealer for further details.

PREVENTIVE MAINTENANCE

To ensure maximum product life and durability there are some simple maintenance steps that you must take. Before you start note the following:

WARNING: NEVER CARRY OUT AIR SUSPENSION SERVICING OR MAINTENANCE WHILE THE AIR SPRINGS ARE INFLATED.

1. Inspect the outside diameter of the spring for any signs of irregular wear or heat cracking.
2. Check the air lines and ensure they do not rub against the spring. Contact between the two can seriously damage the air spring.
3. Make sure there is sufficient clearance around the air spring even when at maximum diameter.
4. Inspect the piston to ensure there is no dirt build up or residue.
5. Maintain correct ride height at all times. Optimum air spring ride height can be found in your service manual.
6. Inspect and clean leveling valves, replace if necessary.
7. Ensure the correct shock absorbers are fitted and that they are functioning properly. If damaged, there will be no limit on the air spring rebound and over extension is a real problem.
8. Check the tightness of all mounts and fasteners. If necessary re-torque to the manufacturers guidelines. Never over-torque.
9. Cleaning – only use approved cleaning fluids such as soap and water, methyl alcohol, ethyl alcohol and isopropyl alcohol. Never use organic solvents, open flame, abrasive and direct pressure based steam cleaning.
10. Carry out this visual inspection on a regular basis for optimum ride, handling and product durability.

INSTALLATION GUIDE

SAFETY ADVICE

All items must only be put under pressure in fixtures possessing a lift/stroke limiter to avoid injury.

MAXIMUM OPERATING PRESSURE

Static operating pressure: 100 psi, unless otherwise specified. Operating pressure when being lifted or during a stroke: 120 psi. Standard Operating Temperature: -76F° to + 158F°. Standard Operating Range: 100 psi

DISMANTLING OLD AIR SPRINGS

1. Jack the vehicle as high as possible and fix the jack securely
2. Allow the air to escape completely from the air spring unit
3. Remove the old air spring

ADVICE ON UTILIZATION OF USED METAL FITTINGS

If you wish to re-use metal fittings such as pistons, covering or clamping plates, please ensure they are clean and show no signs of damage. In case of damage, please contact your authorized dealer or our sales department.

SLEEVE STYLE AIR SPRINGS

Sureride air springs are supplied ready for installation and comply with the fitting requirements of vehicle and suspension manufacturers.

Note: Care must be taken, when fixing air springs fitted with a clamping plate, that the piston holes coincide with those of the spring carrier to preclude any damage to the air spring.

CONVOLUTED AIR SPRINGS

TrelleborgVibracoustic convoluted air springs are supplied ready for installation and comply with the fitting requirements of vehicle and suspension manufacturers.

TrelleborgVibracoustic Convoluted air springs are supplied with an integrated central ring. Additional tension rings must be installed by means of appropriate assembly tools. No responsibility is assumed by TrelleborgVibracoustic for this!

Note: Air springs must not be subjected to any torsional tension when being screwed down.

Toll Free: 1-855-7GETSURERIDE or 1-855-734-8787, sureride@tbvc.com

IMPORTANCE OF REGULAR MAINTENANCE

Sureride air springs are designed for extended years of service in truck & trailer, bus & coach application. The production process of our air springs is continuously monitored.

The majority of premature air spring failures are caused by external effects or improper application including but not limited to those listed in this manual as examples. In principle it has to be considered that the air springs are wearing parts.

Our target with this guide including preventive maintenance advice and cleaning is to assist you in using your commercial vehicle air springs for a long period of time with entire satisfaction.

Regular maintenance will extend the life of your air spring thus allowing you to save both time and cost as well as protect the environment.

WARNING! NEVER TRY TO SERVICE THE AIR SUSPENSION ON A TRUCK OR TRAILER WHEN THE AIR SPRINGS ARE INFLATED!

Check the surface of the air spring bellow regularly. In case of irregular wear, cracks or any other damages please take corrective actions and/or contact customer service of the vehicles. Take care that the air spring bellow never contacts any part of the vehicle (e.g.: compressed air pipes).

The level regulation has an important assignment for the correct function of the whole air spring system. It must be checked regularly, cleaned and replaced if necessary. Please acquire corresponding tips from the manual of the manufacturer.

Be sure you have the proper shock absorbers and check for leaking hydraulic oil and worn or broken end connectors. If any damage is found, replace it immediately. Normally the shock absorber limits the rebound of an air spring and keeps it from over-extension. Check the tightness of all mounting nuts and bolts. If any of them are loose, re-torque according to the manufacturer's specification.

Please make sure that original air springs are replaced by a sureride air spring with reference to the original one.

PREVENTIVE CLEANING ADVICE

THE AIR SUSPENSION SYSTEM ENDURES THE FOLLOWING CLEANING METHODS USED REGULARLY:

- Wiping / washing with cloths, brushes etc.
- Spraying with water (working pressure max: 6 bars)
- Truck washing facility

APPROVED CLEANING METHOD:

- Soap
- Water
- Methanol, ethanol and isopropyl alcohol

NON-APPROVED CLEANING METHOD:

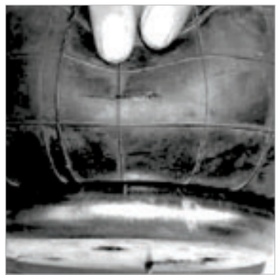
- Organic solvents
- Open flames
- Abrasives
- Direct pressurized steam cleaning

DAMAGES OF AIR SPRINGS CAUSED BY EXTERNAL EFFECTS AND HOW TO PREVENT THEM

SHARP OBJECTS

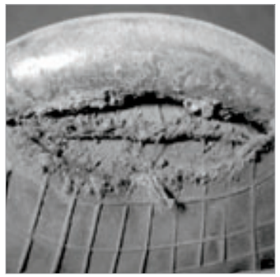
CAUSE OF FAILURE

Sharp objects like glass, metal or stones can cause a cut on the membrane. Also damages can be caused by sharp objects specially during maintenance for example by screw driver. This will lead to air-tightness problems and limited air spring functionality.



RECOMMENDATION

Avoid contact between bellow and sharp instruments and objects. Check the bellow surface regularly. Don't use sharp items to open the package with a new delivered air spring and careful maintenance during assembly activity is required.



EXTERNAL PARTICLES

CAUSE OF FAILURE

When the reinforcement ply is worn by sand or stone, it results in a cut-like reinforcement ply separation especially at the bead area. Usually the edge of the ply is frayed and the surface is dirty.

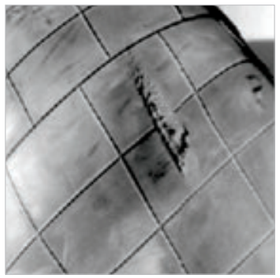
RECOMMENDATION

Review the manufacturer's instructions carefully and clean air spring as well as the vehicle frequently in a proper manner.

ABRASION BELLOW DAMAGE

CAUSE OF FAILURE

An abrasion bellow damage is caused by contact of the air spring membrane with other parts of the vehicles or if the piston is dirty. Also road debris on the air spring can cause those damages.



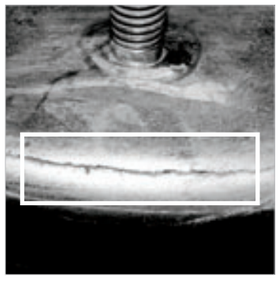
RECOMMENDATION

Avoid contact between bellow and other parts of the vehicle. Also, check the air spring frequently and remove road debris from the bellow.

OVERLOADING

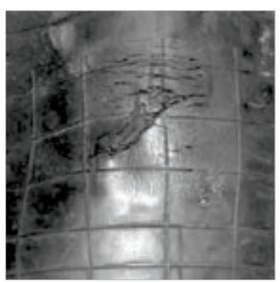
CAUSE OF FAILURE

Overloading the vehicle or driving in full extended lift position as well as using the air spring without or with excessive inside pressure, a mechanical damage on the air spring especially on the composite and / or metal parts can be the result. This leads to air-tightness problems near the air-inlet or bolts and nuts. Faulty shock absorber and improper installation can also cause the damage.



RECOMMENDATION

Follow the operation manual and avoid overloading. Review ride height specified in your service manual. Ensure, that the air spring is used in a proper manner.



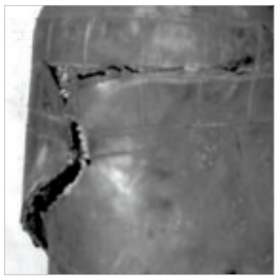
EXPOSURE TO HIGH TEMPERATURES

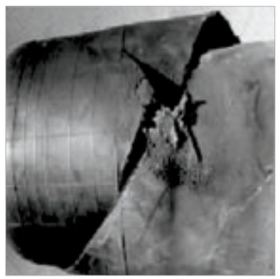
CAUSE OF FAILURE

The air spring was exposed to continuous high temperature (e.g., overheated brake). As a result, the air spring is damaged by high temperature of the bellow.

RECOMMENDATION

Protect the bellow from high temperature and follow operating instructions and working temperature recommendations.





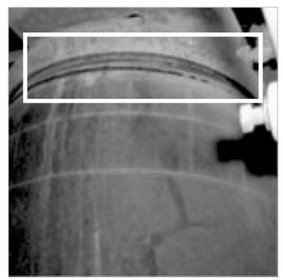
OVERLOADING AND HIGH TEMPERATURES

CAUSE OF FAILURE

Overload of the vehicle and high temperatures as well as external mechanical effects can burst the air spring. The cracks usually appear away from the metal parts.

RECOMMENDATION

Follow the operation manual carefully and protect the bellow from high temperature. Always avoid overloading.



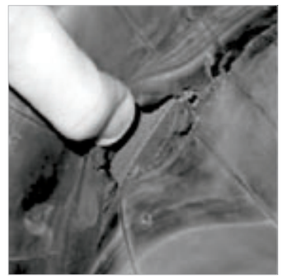
OVER EXTENSION

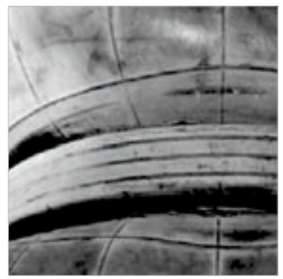
CAUSE OF FAILURE

When the lift stop failed or the shock absorber is installed in an improper manner, an over extension of the air spring is changed. Metal parts are broken and the air spring occurs damaged near to the metal parts.

RECOMMENDATION

Follow the operation instructions of vehicle manufacturers and check the levelling valve regularly. Always select the proper air spring type. Make sure the proper shock absorber is being used.





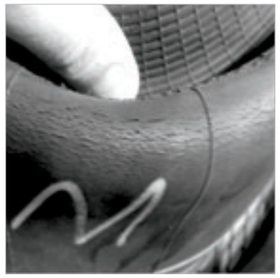
OVERLOADING (CONVOLUTED)

CAUSE OF FAILURE

When an air spring is working with low air pressure, the minimum height recommended of the vehicle is overloaded, the girdle hoop of convoluted air springs cracks.

RECOMMENDATION

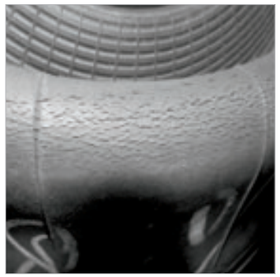
Avoid overloading and review the recommended assembly height. Follow the operation instructions carefully. Check leveling valve and shock absorbers.



HIGH TEMPERATURE

CAUSE OF FAILURE

Due to environmental factors, (i.e. ozone impact) or higher working temperature, the rubber ages and fatigues. That is a normal process, because the air spring is a wearing part. It can still be used and should be checked regularly like any other wearing parts.



RECOMMENDATION

The membranes shouldn't operate continuously under high temperature. Follow the warranty advise of the vehicle manufacturer.

TORQUE

CAUSE OF FAILURE

When the air spring is over torqued or the metal bead rings are not assembled in the right way, threads will be damaged. As a result, bolts or threads are extracting or turning of connections and the bead ring of convoluted air springs is deformed.

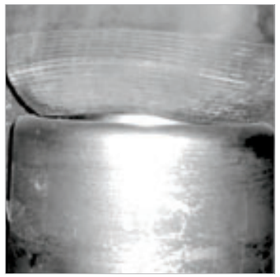
RECOMMENDATION

Review the torque value specified on the technical data sheet or on the air spring label.

DEFORMATION OF PISTON

CAUSE OF FAILURE

A deformation of the piston and the components because of external bumper failure or missing bumper, the top plate on the piston is crashed due to abnormal deflection of the air spring.



RECOMMENDATION

Replace the air spring and the defected external bumper (if any). Ensure, that the specified maximum spring way does not exceed. Check the air spring system and if an external jounce bumper is present, please check regularly for compression.

DISCLAIMER

The data and information presented in this catalog are the results of extensive research and long-term experience in the design and manufacture of air springs for truck, trailer, bus, coach and industrial applications. The data is believed to be accurate. However, this catalog is provided only for information purposes and TrelleborgVibracoustic is not responsible for any typing errors or misprints that may have occurred during production. In the interest of product development, TrelleborgVibracoustic reserves the right to make technical amendments and updates to the drawings listed in this catalog, without prior notice.

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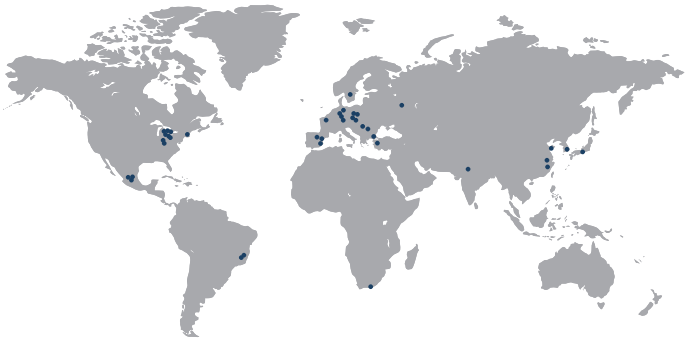

WE THINK GLOBALLY AND ACT LOCALLY

AT YOUR SERVICE AT 38 LOCATIONS WORLDWIDE:

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Bloomfield Hills, MI
Carmi, IL
Guarulhos, BR
Lerma, MX
Ligonier, IN
Manchester, NH
Morganfield, KY
Plymouth, MI
Querétaro, MX
Sandusky, MI
South Haven, MI
Taubaté, BR
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AFRICA

East London, SA

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CHINA

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HUNGARY

INDIA

MEXICO

Sureride Air Springs
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